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ECONOMIC GEOGRAPHY AND THE PEOPLE'S COMMUNE

- Communist China -

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I. THE ROLE OF ECONOMIC GEOGRAPHY IN THE PEOPLE'S COMMUNE PROGRAM

[Following is a translation of an article by the People's Commune Programming Division, Department of Geography, Teachers' College, Peiping, in the Chinese-language periodical Ti-li Hsueh-pao (Acta Geographica Sinica), Vol. 25, No. 1, February 1959, Peiping. This article is the collaborative work of 20 authors, including Heng Chi-wei, Lien Hong-yuan, and Wu Hsing-han.]

Introduction

Since the summer of 1958, a large number of people's communes have emerged in the rural areas in our country. The people's commune is a coordinated organization of workers, peasants, businessmen, educators, and soldiers and is the united body between the government and the society. Its emergence, on one hand, has attracted the attention of the people with its vitality; on the other hand, the problems of production and economic development in the people's communes have become the new assignments for the people, especially for the economic geographical workers.

In respect to the educational work in 1958, the point that particularly aroused the attention of the people was that education must serve the proletarian ideology and that education must become a mass movement in conjunction with productive labor.

Under this situation, the 20 students in the senior class in this department, for the purpose of contributing their share in the building of the people's communes, finding a correct and faster approach in coordinating economic geography with production, promoting a reform in teaching and learning, and meeting the demand of catching up and surpassing the advanced level in economic geographical work in the world, the task assigned to them by the Great Leap Forward Movement, had cooperated with the Architectural Institute of the Department of Architectural Engineering in the formation of eight people's commune programming groups. From early November to late December, these groups had laid out the over-all programs for 7 joint people's communes at hsien level and 16 individual people's communes in Kwangsi, Fukien, Szechwan, Hupei, Shantung, Honan, Kansu and Inner Mongolia.

The programs for the people's communes included two major parts. One part was concerned with economic programs including farming, forestry, animal husbandry, subsidiary production, fishery and industrial developments, and the boundaries of small villages merging into larger ones. Another part was concerned with the reconstruction program, including the layout of important inhabitant concentration points and the individual designs of certain important construction.

The economic programs were mainly designed to find solutions to the problems of major production items, targets, scales, distribution, and measurements to be taken. Our work was mainly concentrated in this part.

In the course of laying out the programs, we all felt that for the purposes of attaining rational and faster production development in the people's communes, strengthening the communes, and obtaining a better planned and faster approach to production development in all regions as well as in the whole country, the people's commune programs must be laid out on an over-all basis.

Defects in the programs laid out by us were unavoidable, in view of the facts that each group had only a few members with limited experience, that the field works were completed in less than 50 days, and that the situation was rapidly evolving, but we did learn some unforgettable lessons in the 2 month field works. This article only deals with the relationship between the people's commune programming and economic geography and with the kinds of problems that economic geography can help to solve in laying out the programs for the people's communes.

A. The Relationship Between Economic Geography and the People's Commune Programming

In the course of laying out the programs for the people's communes, we have found that the role of economic geography in this respect can be discussed as follows:

1. Survey of Present Conditions. A comprehensive survey of present conditions is the prerequisite for working out an economic program for a large as well as a small area. The same is true for laying out programs for the people's communes. A discussion of the necessity of undertaking comprehensive surveys of present conditions seems quite wasteful. A program would become a fantasy if it were not based on the survey of present conditions. The planned economies can not be developed in the right direction without such survey.

A general survey consists of many topics such as the basic conditions, economic foundation, natural conditions, utilization of natural resources, economic characteristics, production allocation, the history of geography of the area under survey, the conditions in surrounding areas, the coordination between one commune with other communes, and the problems facing the commune etc. In addition, the ideology, educational level and the customs of the members of a communes must be understood.

Geography, economic geography in particular, is a comprehensive science. Therefore, before he undertakes a general study of present conditions, an economic geographer must pay attention to all aspects, and must start from a general viewpoint. An economic geographer is capable of completing such a general survey, whether it deals with natural conditions, or economic or historical aspects. We may say

that aside from the economic geographers, other individual industrial or agricultural departments can hardly undertake such general survey with so many items. For instance, when an agricultural department conducts a general survey, it often stresses crops, sowing areas, soil, topography, climate, water resources, and other natural conditions that are related to agricultural production, but neglects industrial production and industrial location. A comprehensive survey conducted by an industrial department would inevitably stress the industrial aspects. This is not to say that these surveys are incorrect and have to be done in the same manner as those by the economic geographers. Rather, they are too specialized and have different functions.

We may say that the ability to present a general survey of the existing conditions of an area is one of the special features of an economic geographer. Such a survey provides ample material and sufficient evidence for preparing a program for a people's commune.

2. The Direction of Operation. In laying out a program for a people's commune, the first problem to be faced is the problem of direction of operation. In order to attain a sound economic development for a people's commune, it is necessary, in addition to studying and following the party's guidance and policies, to have a correct understanding and a general viewpoint of the characteristics of an area.

The Sixth Session of the Central Committee of the Eighth Party Congress pointed out: "The correct direction of production development in the people's commune is to follow the unified program of the state taking into consideration the characteristics of the area where the commune is located, to adhere to the principles of austerity and hard work in operating the people's commune for the purposes of developing simultaneously industry and agriculture and of engaging in self-supporting production and commercialized production." This direction is the correct basis in laying out the program for a people's commune. But this is not to say that there is no problem other than following the party's direction. It is not so simple. Each people's commune has its own characteristics. Each commune is an individual production unit and is also a part of the social organization. Its production is closely related to other areas. For instance, one of the goals of a people's commune is to be self-supporting, but in what kinds of products does the commune need self-support? To what degree is the commune to support itself? A commune is also to be engaged in commercialized production, which involves the problems of what kinds of products are to be produced and to what degree? This is true for industrial production as well as for agricultural production. These problems are particularly significant in the communes which do not have clear-cut characteristics and can produce all kinds of products. The following two communes well illustrate these problems:

(1) The Cheng-mon people's commune in Min-hou Hsien, Fukien Province, situated in Nan-tai Island at the outlet of Min-chiang, is an advanced commune. It is only 10 kilometers from Foochow. Other

than the two small hills with altitudes of approximately 100 meters, which account for only one third of the land area, the rest of the land area in the commune is level land. It has a total land area of 48,000 mou and a population of 40,300, but it has only 25,000 mou of farm land, a typical overpopulated area. The major crops of the commune are rice and citrus fruits, followed by wheat, rapeseeds, vegetables and jasmine. In October, 1958, a production program was laid out for the commune which specified: "In agricultural production, the major goals are to increase the production of food and citrus fruits, to develop a multi product economy, to reduce the acreage of crop land but increase the unit yield, and, at the same time, to increase the production of economic crops (citrus, cotton, sugar cane and jute, etc) and oil-bearing crops. In industrial production, it is demanded that a complete industrial system is to be established (within 3 years), with emphasis on steel and iron and machine-building industries." According to this direction, the commune is to plant 1,000 mou of cotton for the consumption of the commune members this year, but the fact is that the area has never grown any cotton. The commune has no experience in cotton-growing and the natural conditions are unfavorable to such undertaking. For instance, the area is rainy in the spring, summer, and fall, its soil has high acidity (ph is higher than 5) and the sunlight is short in the summer. For the purpose of self-support in industrial production, the program requires the establishment of a complete industrial production system, which is naturally a mistake. The program demands that the commune build an iron smelting plant with an annual capacity of 10,000 tons, a steel mill with an annual capacity of 2,000 tons, and a machinery factory equipped with 15 lathes. It is highly problematical whether the commune is capable of doing all these things. Moreover, this area produce neither iron nor limestone. It has only a very small reserve of iron ore which contains only 5-10 per cent of iron (the remainder is clay)!

When we worked out another program for this commune in early November last year, we suggested the revision of the previous production goals in the light of the characteristics and the developmental conditions of the area. We suggested that "in agricultural production, the goals be to develop economic crops step by step with the assurance that enough food is to be produced for the consumption of the commune members, and to strive for the development of subsidiary production such as animal husbandry, fisheries and vegetables, for the purpose of raising the standard of living of the commune members and supporting the needs in Foochow and in the front." Our direction is distinguished from the previous direction in that it places the economic crops (mainly citrus fruits) in a much more important position and stresses the development of subsidiary products such as animal husbandry, fisheries, and vegetables. According to our direction, the land areas in citrus fruits will be increased from 1,600 mou in 1958 to 6,000 in 1962, the acreage in rice crop will be reduced from 18,000 mou to

5,000 mou; 15 mou of cotton crop has been planted this year for an experiment. In industrial production, the goals are to "serve the needs of agricultural production and of the daily necessities of the commune members and to serve the cities." The plans for setting up a steel mill, machinery factory, and other industrial plants were cancelled in our program.

According to our program, the Cheng-mon commune which largely produces rice at present, will produce mainly citrus fruits in the future as its major commercial product to meet the need in the domestic and foreign markets. The major commercial industrial products will be bricks, boats, noodles and processed meat etc.

Of course, it still could not be said that there was no problem in our production goals and in our program laid out for the Cheng-mon commune. In certain aspects, we felt that we could not find good solutions. This was so, because we did not have a thorough understanding of the characteristics of the area, and of the relationship between the Cheng-mon commune and other communes and other areas in terms of exchange of goods for the purpose of most feasible and most economical division of social labor. If our program did give more careful study to the various conditions of the area and to the relationship with other areas, our program could be made a much more practical and sounder program than the previous one.

(2) The Green Treasury Commune in the suburb of Nan-ping Hsien, Fukien Province. The first program laid out for this commune specified that the goals were to "stress farming, giving appropriate attention to forestry development, to produce a variety of economic crops and to develop animal husbandry." According to this program, each commune member was to farm 2 mou of land this year (that was 8 mou for each laborer), and the rice crop yield was to be increased from last year's 600 catties to 4,000 catties.

We also analyzed this program to see whether it was practical for the area in where the commune is situated. This commune is situated in a hilly area and is in a well-known forest district. Its characteristics are completely different from those of the Cheng-mon commune. The commune has a total land area of 550,000 mou, of which forest land accounts for 421,000 mou, idle hills and young forest areas account for 80,000 and farm land accounts for 50,000 mou. It has a population of 21,057.

Because the area is mainly a hilly region, it is less suitable farming than the Cheng-mon commune. Its defects are: farm lands are mostly table lands with small sizes and thin soil layers (40 per cent of the lands of certain production teams have soil layers less than one foot under which are rocks), the farm lands are scattered about and are distant from the population concentration points, many farm lands have cold water and are not too accessible to transportation, and the farm tools have become obsolete. It has lower temperature than the Cheng-mon commune but both produce only one crop in a year

(two crops in the cities), but the program laid out for it demanded that it become a farming area and produce 4,000 catties of rice per mou (equivalent to the demand for the Cheng-mon commune).

Economic geography does include the study of whether this production target can be attained, but it can predict that the simultaneous emphasis of farming and forestry as stipulated by the first program does not have any assurance, let alone the energetic developments of animal husbandry and economic crops.

The program did not mention the emphasis of forestry, nor did it mention the development of forestry products but hoped that rice would become the commercial product of the commune. Is this the over-all national approach to deal with the special problems of certain localities? It is certainly a problem that requires careful study.

It is seen from the foregoing examples that the present programs for the communes are not based on the characteristics of the areas and have not thoroughly carried out the party's policy for production development for the communes. These programs are not uniform and do not have an over-all arrangement. It is the task of economic geographers to find solutions to these problems. Based on the studies of the special characteristics of the areas, the economic geographers can work out sound operational directions in accordance with the party policies.

3. Production Arrangements. One of the production features of the people's commune is the coordination of specialization with comprehensive development. Its production includes industry, farming, forestry, animal husbandry, business, fishery, etc. It is, therefore, necessary that the various branches of production have an over-all and rational arrangement and be tied up into a close-knit organism. This is a necessary requirement for multioperations in the people's communes. When only agricultural production is concerned, the significance of production arrangement is not very evident. Once multioperations come in, the necessity for production arrangement becomes very important. In fact, whenever there is production, there exists the problem of production arrangement. When multi operations are practiced, production arrangement becomes more complicated. At the present, there is a urgent need for a theory of production arrangement for the people's communes. This is also a task to be done by the economic geographers.

Experiences in actual production have shown that irrational production arrangement creates dislocation between the branches of production and results in waste in raw material, by-products, transportation, and labor. For instance, a fertilizer plant was originally set up in Ta-hua-ling by the Wu-chang Joint Commune of Hupei Province. The main reason for setting up the plant in this location was the accessibility to transportation. The Peking-Canton Railroad passes through this place and is conveniently connected with Wu-han City. The other reason is that the public may conveniently visit the plant,

but the product of this plant is mainly for the need of agricultural production of the joint commune. To locate the plant in Ta-hua-ling is against the principle of obtaining local raw material for local production and local consumption. Ta-hua-ling is situated in the border area of Wu-chang Hsien, quite distant from the farm lands of the joint commune. Moreover, the raw materials needed by the chemical fertilizer plant are imported from other areas. It is evident that the location of the chemical fertilizer plant in Ta-hua-ling is unsound. The plant has been moved from Ta-hua-ling to Wu-lung-chuan according to the production arrangement principle of economic geography. The new location is situated in the center of the farm lands of Wu-chang Hsien, which produces coal and iron and has a steel mill operated by the joint commune. The raw materials for the chemical fertilizer are the by-products of the steel mill, making the former a subsidiary of the latter. The new location is accessible to railroads and highways. This example illustrates that the production arrangement principle of obtaining local raw materials for local production and consumption and the coordination of production is one of most important principles to be considered in arranging the various production items of the people's communes. It also reaffirms that production arrangement must take into consideration the over-all viewpoint.

In programming, the economic geographers are capable of adhering to the party policies and the state plans and of applying the special knowledge of economic geography to analyze the natural conditions (topography, soil, vegetation, climate, water resources, and other natural resources), historical background, labor force, and economic characteristics to formulate the most economical production arrangement proposals for the production development of the people's communes. In the agricultural production arrangement of the people's communes, the essential point is the production distribution of farming, forestry, animal husbandry, subsidiary production, and fisheries and their coordination. In industrial production, it is necessary to follow the principle of separating the large enterprises and merging the small ones to determine what industrial departments are needed by the communes and how these departments should be distributed and to coordinate industrial production with agricultural production. The economic geographers can play an important role in production arrangement when they lay out the programs for the communes. Other departments may pay too much emphasis to their special fields and neglect the over-all production arrangements of the people's communes. For instance, certain planning departments ignore the production arrangements in the programs they lay out for the communes, but are very careful in detailing the production targets. The program laid out by the City Reconstruction Bureau of the Reconstruction Department of Honan Province contains an industry distribution plan. The bureau officials say that the plan was worked out according to the theories of economic geography. This indicates that economic

geography goes well with production planning, and should play an important role in the reconstruction of the people's communes. Well-planned programs for the communes need the coordination of many agencies. The economic geographers must take part in this work.

The general reaction is that economic geographers can take on an over-all viewpoint in laying out the production arrangement for the communes, because production arrangement is one of the research objects of economic geography. In laying out the production arrangements, the economic geographers are more able to study the production characteristics, the conditions of various locations, the relations between the areas, and the relations between the production departments. They are more capable of considering the problems from all angles, analyzing the functions of various factors, and finding out the decisive factors in laying out the production arrangements. Their purposes are to find out the production arrangements that are most suitable to the need of production and most economical. For instance, the Cheng-mon commune in Min-hou Hsien in Fukien Province has 3,000 mu of land which are located in the tideland between Min-chiang and Wu-lung-chiang, subject to annual inundation, suitable only for growing one rice crop a year; the area is inaccessible to transportation. In our program laid out the commune, we suggested that the land be used for planting the perennial reed grass from Taiwan. The reasons for this suggestion were: (1) inundation does not hurt the growth of the Taiwan reed grass, (2) it produces more income than growing a single crop of rice; and (3) it produces excellent raw material for the matting industry. This suggestion was quickly accepted.

4. Merging the Villages and Determining the Locations. Since the organization of the communes, the scale of operation has been expanded and agricultural production has emerged from small fields into large ones. Following the need for production expansion, organization has become militarized, action has become combat-like, and life has become collectivized. This requires that the scattered population concentration points in the rural areas must be centralized. The old population concentration points must be merged together or reformed to build up new concentration points to meet the demands for production increase. Therefore, in the programs laid out for the communes, they should include plans for merging the villages and determining the locations. In the works of merging the villages and determining the locations, the task of the economic geographers is to study and solve the following problems: Which of the existing population concentration points have lost their proper function or are unfavorable to production development? Which still play a certain role at the present and in the future? Where should new population concentration points be established to meet the demand for production expansion? What changes will the existing population concentration points have in terms of production function and scale? What arrangements the population concentration points in the communes should be made that are favorable to production and living? How should the scales be determined? In short, the major task of the economic geographers in the

work of merging the villages and determining the locations is to find a solution to the arrangement of the population concentration points to meet the demand for production expansion.

The foregoing problems should be solved on the basis of the production plans. The population concentration points are to be established according to the need for production expansion. The population concentration points in the communes are the political, economic and cultural centers of the communes. Doubtlessly, these centers of the communes should be located in the production centers of the communes which are accessible to transportation, conveniently connected with the production districts of the communes and with other communes and other areas. In general, the population concentration points are located in the production districts which are readily accessible to transportation facilities (not necessarily the geometric center) and are the commanding production posts. In the areas with different production characteristics, the production functions of the population concentration points also differ from one another. Therefore, the population concentration points in the communes are of many kinds such as the biproduct and multiproduct concentration points, and the specialized concentration points which are engaged in a special kind of production such as the industrial concentration points, animal husbandry population concentration points, forest population concentration points, and fishery population concentration points, etc. Because the production districts are different in their nature of production and scales of production, the scales of the population concentration points should vary. The number of population concentration points in a commune should be determined according to the developmental levels of mechanization, electrification and convenience in transportation, and the natural conditions of the area, whether the commune is located in the hilly area or in the plain. The size of the production diameters of the population concentration points should be determined according to the nature of production and the natural conditions. According to our experience in Cha-yao-chien-chi in Inner Mongolia, the production diameter in a farming area should not exceed 5 li or more than 8 li in a forest area, or 10 li in an animal husbandry area. The scales of the population concentration points should be determined in accordance with their need for labor and the economic and educational levels in these areas. The high-yield areas and economic crop producing areas require more production labor and therefore their scales should be larger. This means that there should be accurate estimates and scientific analysis of the future production developments in the various production districts.

The determination of the locations should begin with the existing population concentration points to determine which population concentration points should be retained, which should be abolished and where new population concentration points should be added. In studying the role of the various production factors for the determination of the locations, it is also necessary to study the role of the historical as well as the nationality factors. In selecting the population

concentration points, the administrative centers of the minor nationalities should be retained. For instance, the center of the Pa-yin-ta-la Commune of the Cha-yao-chien-chi Joint Commune in Inner Mongolia might have well been determined at Tu-cheng-tse, but in view of the fact that Yin-pei-liang was the former capital of the Huang banner government, and was the administrative center of the Mongolians in that area, Yin-pei-liang was the final choice as the center of the commune. In addition, natural conditions such as topography, water resources, wind direction, the depth of frozen soil layers, the nature and firmness of the soil layers should also be considered. The arrangement of the population concentration points in a commune must be evenly distributed, so that the population concentration points can keep in touch with one another easily. The population concentration points are generally located around the center of the commune. Operation stations could be added to the nearby population concentration points when necessary. The above discussions are general principles and problems could be expected when comes the actual arrangement of an area. In laying out the programs for the communes, the economic geographers must take care of this task. It can be said village merges and location determination or arrangement of population concentration points are included in the research subjects of the economic geographical workers.

5. Coordination and Balance. Production in the people's commune is to be expanded proportionately according to plans. Therefore, the proportions between various production items, between the various branches of production, and between the production districts must be maintained according to the state plans and according to the special conditions in the localities, so that the economies of the people's communes can move forward steadily and rapidly.

By 'coordination' it is meant that the commune must be viewed as a body and its production items, the various branches of production, the production districts, and the production facts can not be dealt with separately. In laying out the program for a commune, the first consideration is the balance of the system and then the balance among the various production items. This means that it is first necessary to strive for the balances among the volumes of production, production value, labor, production tools, and production items in industry, agriculture (including farming, forestry, animal husbandry, subsidiary production, and fisheries), communication, transportation, and commerce, and for the balances among the production districts. When this goal is attained, the next step is strive for the balances among the various branches of production or for the balances within a district.

A people's commune is a coordinated production body. Its various branches of production are closely related in a rather complex manner. The organization of one branch may lead to the organization and development of another branch of production. For instance, owing to the big leap forward in production and the need for processing agricultural products in the Wu-chang Hsien Joint Commune, the program worked out

for the commune should accordingly include the establishment of a farm machinery plant, a chemical fertilizer plant, and a farm product processing plant. Moreover, due to the expansion in marine production by the commune, the program should also include the establishment of marine product processing plants in the commune's four marine producing centers.

Because an economic geographer has a good understanding of the basic principles and procedures of various kinds of production, he is capable of making suggestions on how to utilize the local natural resources and most economical organization in accordance with the characteristics of the area for promoting the over-all production expansion and reasonable balance of that area. In a program, the plants and enterprises which have close relationship in the utilization of the natural resources are placed together as related production organism. If the programs we work out are for the iron producing areas, then the programs should include the organization of iron and steel enterprises in accordance with the ore reserves and other conditions. These enterprises include the iron smelting plant, steel mill, machine-building plant, chemical fertilizer plant, etc. The proportions of production of these various enterprises should be determined according to the needs and possibilities.

When an economic geographer takes part in working out a program for a commune, it is first necessary to have a good understanding of the characteristics of the area, so that he can determine the direction of production for the area according to the need of the locality. At the same time, he should strive for the balances among the production districts within the commune in order to attain a reasonable geographical division of labor and for balanced developments among the various production districts. For instance, the industry in Cha-yao-chien-chi in Inner Mongolia is mostly located in Tu-kuei-wu-la where also is produced a great amount of sugar beets. We first considered setting up a sugar plant in this area, but for the sake of balance among the production districts, our program finally suggested Mei-kuei-ying as the site for the sugar plant in view of the fact that this area had fewer industrial enterprises than other districts.

6. Mapping According to Maps. In a workable program for a joint commune or for a basic commune, the use of maps is very important. Maps are even useful to those who are familiar with the area where a commune is located. We can understand and judge the natural conditions of a commune by studying the maps and determining whether the existing production arrangements are sound. Maps are also helpful in working out various plans. Mapping the area is an even more important job. In addition to the text, tables and graphs, maps are necessary component parts of good commune programs. If the programs do not include the plan maps, then the allocation of the various production items, their relations and the problems in production arrangements, and the possibility of fulfillment of these plans can not be considered complete. Furthermore, the inclusion of plan maps will cut short the text and can easily be understood. To our knowledge, the programs worked out by the communes themselves or with the help of other agencies have not made full use of

the maps. For instance, many planners, when helping the communes in working the programs, often give too much emphasis to the production plans and planned targets, but pay very little attention to the layout of the spaces of the communes. We can say these programs are not good programs.

Economic geographers are well trained in the use of maps, including the topographical maps, climate maps, and economic distribution maps and are also capable of using maps to express the contents of texts. In helping the communes to work out the programs, if the economic geographers can make full use of this tool, the resultant programs would be much improved and more practical.

Certain communes still do not have maps and topographical maps. Others have only small-scale maps which have too many mistakes to be useful. They should solve these problems as soon as possible. In finding solutions to their problems, these communes can rely on the cadres and the masses for conducting field surveys. In addition, the economic geographers can make use of sketches or enlarge, reduce, or revise the old maps. The completion of this task is also within the capability of the economic geographers.

B. Conclusions

In the course of working the programs for the communes, we must re-examine the question whether an economic geographer can be of any service to production. The answer is affirmative. The people's commune is the natural result of the economic and political development of our country and is a new kind of social organization in the human society. It is a "small society" within the "large society." It needs all sorts of people for reconstruction work, including the economic geographers.

In taking part in working out the programs for the communes, the economic geographers have an opportunity to play their role. This means that an economic geographer must follow the party and state policies, take into consideration the conditions and characteristics of each commune, determine the goals of operation of the people's commune, sound production arrangement and the directions of development of the various production districts within the commune, engage in the coordination and balancing of the national economy, determine the locations of the population concentration points, conduct economic surveys and surveys of natural conditions, and prepare maps. This sort of saying, however, does not express the need for the economic geographers. No matter who prepares the program for a commune, an over-all and sound solution can be found by a deeper understanding of the economic geographic theories and methods. In the course of working out the programs for the communes, it was felt that the application of economic geography to directing the planning works for the communes is still quite insufficient in certain aspects, which should be overcome in the future. At the same time we suggest that economic

geographers should cooperate with other production departments in working out the programs for the communes. By doing this, it is entirely possible to work out better programs for the communes.

For further consolidation of the communes and in view of the needs for production and reconstruction, the economic geographer must quickly make out reports on the natural and economic conditions of a commune and engage in the study of its geography. This is one aspect in which economic geographers can serve production. To have new developments, the economic geographers must make themselves available in social reconstruction and coordinate the production development in the communes, so that economic geography can become a science in the economic development in our country.

II. EXTENDING THE PROGRAMMING WORK FOR THE PEOPLE'S COMMUNES

[Following is a translation of an article by Li Ping-shu, Deputy Director of the Institute of Geography (Academia Sinica), in the Chinese language periodical Ti-li Chih-shih, No. 9, September 1959, Peiping, pages 385-386.]

In the past year, a large number of geographers have voluntarily and enthusiastically taken part in the programming work for the people's communes. According to the present preliminary statistics, there are some 600-700 workers from 30 geographical research organizations and from the departments of geography in various colleges who have teamed up to work out the programs for more than 100 communes in 19 provinces and cities. They have helped the communes to work out the production and arrangement programs in industry, agriculture, animal husbandry, forestry, fisheries, water resources, population concentration points, communication and transportation, have written out more than 170 reports, and have prepared more than 900 maps. Recently, the Geography Association of China sponsored a People's Commune Programming Work Forum in Tientsin for the purposes of reviewing the achievements, exchanging work experience and discussing the theories. More than 20 reports were read in the forum. The topics of these reports ranged from programming methods to theory studies, from general discussions to specialized fields, and from work experience to the problems encountered in the programming work. This forum played an important role in furthering the people's commune programming work and in theoretical studies.

The people's commune is the basic coordinated unit of workers, businessmen, farmers, scholars, and soldiers in our socialist structure. It is also a basic unit of our socialist governmental organization and a coordinated production body in a small area. It plays the role of stimulating the development of productivity and production relations. Therefore, working out the programs for the people's communes is an urgent task at the moment. There is a practical significance in helping the people's communes to work out well-planned programs and to study the rules of related affairs. In helping a commune in the Wu-hu suburb to work out its program, the Teachers' College of Anhwei suggested that the development of subsidiary foodstuff production instead of cotton should be the major task in the city suburb areas. The suggestion was readily agreed to by the commune. The Department of Geography of the Teachers' College of Chirin helped the Chiang-mi-feng People's Commune in Yung-chi Hsien to work out a road network program and a water conservation program. These programs have been accepted by the commune and the construction works have been underway according to the programs. Moreover, the people's commune programming work is a good start for laying out the regional programs. For example, Nanking University has worked out a regional agricultural program for

the Huai-yang Special District in this manner. Because the regional program was worked out from good foundation, it was considered well-planned and readily accepted. It is seen therefore that the geographers can fully utilize their many-faceted knowledge in working out the programs for the communes, which, to a certain degree, are helpful to the economic development of the communes.

In working out the commune programs, the problems of development principles, development direction, scale, and speed must be taken into consideration. These problems are naturally related to the problems of coordination between industry and agriculture, to the proportional developments of many products in agricultural production, the sound utilization of land, to the locations of the population concentration points, and the construction of the transportation networks. The people's commune is the product of applying Marxism-Leninism in China. Therefore, if the foregoing problems can be studied in light of the characteristics of the people's commune, it will be possible to find a new set of geographical theories that are applicable to China. This is a new development with great scientific significance. In the forum just mentioned, certain geographical theories in relation to the people's commune programming work were discussed. These discussions were mostly related to the basic theories of economic geography. For instance, the discussions included the questions of what major objects should be covered in the survey and research work for laying out the people's commune economic programs, whether the scope of work of the economic geography has its limits, what is the relationship between the commune program and the regional economic program, how to make the commune program more practical, what should be the proportions of various branches of economy, how to carry out the policy of simultaneous development of industry and agriculture, of eliminating the differences between the urban and rural areas, how to absorb the experiences in the "two transitional periods," and how to make economic appraisals of the natural resources, etc. During the discussions, each participant suggested his own viewpoints according to his own experience. The viewpoints of the participants were not the same, but we could see that this kind of theory is beginning to germinate.

In the course of taking part in working out the programs for the people's communes, there was produced a coordination among teaching, scientific research, and production. The students of economic geography have come to realize that economic geography is not an abstract science, but their understanding of the courses is still far from sufficient. Therefore, they are inclined to become more specialized in their learning. At the same time, such a practice has produced a vast amount of subject material for teaching. Both teachers and students have been more energetic in their work and are busy in studying the theory. This was evidenced by the fact that during the forum just mentioned, a large proportion of the reports were submitted by the young economic geographers. The rapid growth in the

number of young economic geographers is a very good thing. This fact tells us that only if our work is designed to serve socialist reconstruction and has shown certain achievements, then this kind of work is the most effective way to train cadres, to consolidate their conviction, and to speed up the development of science.

It is seen from the foregoing discussions that the geographers, especially the economic geographers, had made a correct decision when they adopted commune programming as an important research project immediately after the emergence of the new and dynamic commune organization.

Since the communes have been established for only one year, we still lack sufficient understanding of many commune problems and lack work experience whereas new situations are rapidly developing. Therefore, we should not be satisfied by the limited accomplishment we have made and take things easy. We must proceed to extend the commune programming work and be more diligent in studying the theories of economic geography. There are several tasks for the future:

(1) We must extend the size of the areas to be surveyed. In the past, our work was mostly centered in the rural areas. In the future, emphasis must be given to surveys of the communes in the pastoral areas, forestry areas, hilly areas, and fishery areas, so that we can come to a generalization of the theory and working method most suitable for commune programming. (2) There must be depth in the commune surveys. We should not consider the work in the communes having been surveyed as being completed. Since our programs are still not completely in accord with the rule of environmental development, they must be revised in accordance with the changing situations. Therefore, we must establish long-term cooperative relationship with the communes. Each year, we must get the communes to see whether the programs formerly worked out were correct and, if not, to revise them. By such undertakings, we can gain a deeper understanding of the rules of the related matters. (3) We must give greater emphasis in generalizing the theories and to raise the level and to expand the scope of the science of geography. Only if we can theorize our experiences can these theories become a general guide for the purpose of expanding our work. In the past, we mostly discussed the practical working methods of commune programming and barely began the exploration of the theoretical aspects. In the future, we must pay more attention to theoretical discussions.

At the present, the commune programming work should be as practical as possible. Of course, the programs should point out the future prospects, but the fulfillment of the programs can be achieved only by the efforts of many people. Therefore, the programs should be practical and should contain the organizational measures, technical measures and economic measures to be carried out. A good program should be sound in economics, practical in technology, and should be welcomed by the masses and the cadres. Next, the program must be able

to stimulate the future developments of production and production relations in the commune, to increase the income of the commune, and to improve the living standard of the masses. Third, the program should be based on the geographical theory and should enrich the theory to further the development of the science of geography.

We are deeply convinced that all geographers in the country will be able to follow the correct approach under the leadership of the party to further the commune programming work. If so, we shall be able to accomplish more for socialist reconstruction and for the future development of the science of geography.

Geographers in the country have been engaged in research and teaching in the field of geography and have made significant contributions.

For example, the Institute of Geography of the Chinese Academy of Sciences has conducted extensive research on the geographical conditions and the agricultural production base in the northern part of China, and has made significant contributions to the development of agriculture in the northern part of China.

The Chinese Academy of Agricultural Sciences has conducted extensive research on the geographical conditions and the agricultural production base in the southern part of China, and has made significant contributions to the development of agriculture in the southern part of China.

The Chinese Academy of Agricultural Sciences has conducted extensive research on the geographical conditions and the agricultural production base in the central part of China, and has made significant contributions to the development of agriculture in the central part of China.

The Chinese Academy of Agricultural Sciences has conducted extensive research on the geographical conditions and the agricultural production base in the western part of China, and has made significant contributions to the development of agriculture in the western part of China.

The Chinese Academy of Agricultural Sciences has conducted extensive research on the geographical conditions and the agricultural production base in the eastern part of China, and has made significant contributions to the development of agriculture in the eastern part of China.

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III. ECONOMIC GEOGRAPHY AND THE PROBLEM OF COMMUNE
ECONOMIC PROGRAMMING

[Following is a translation of an article by Cheng Iu-han, in the Chinese-language periodical Ti-li Chih-shih, No. 9, September 1959, Peiping, pages 387-389.]

The people's commune is the product of the economic and political development in our country. It was born to meet the needs of the present stage of socialist reconstruction and in the transition to Communism in our country. The organization of the people's communes all over the country in 1958 not only speeded up our nation's socialist reconstruction, but also made it possible to speed up the national economy. The problems of how to utilize the potential of the people's commune and to make over-all, sound arrangements in the production and development of the various departments of the communes in accordance with the state plan and with the principle of devising special programs for specific areas for the purpose of continual development in production have become important tasks in consolidating the development of the communes.

In the past year, the economic geographers have universally taken part in the commune programming work and have made certain contributions to this aspect. This undertaking not only opened up new territories to the economic geographers to practise their learning in production, but in the course of conducting commune surveys and working out the programs for the communes, has also trained them. They have become a strong force, increasing the knowledge in their specialized field, enriching the learning of economic geography and raising the level and quality of scientific work. Many economic geographers in a number of departments have also generalized their experiences in commune programming work into principles, and summed up the contents and working methods in this phase of work; this provided a good foundation for future research. This article attempts to discuss the scope of commune programming, survey of present conditions, the relations among different phases of programming work, the balancing and generalizing of the programming works, and preparation of economic maps and so on, from the economic geographical viewpoints.

A. The Scope of the Program

At present, the programs worked out for the communes by the economic geographers include the fields of farming, forestry, animal husbandry, subsidiary production, fishery, industry, communication and transportation, water conservation, population concentration points, culture, education and welfare. Some workers even prepare trade programs and programs for eliminating the "four devils" for the communes. The farming, forestry, animal husbandry, subsidiary production and fishery

programs are production programs; communication and transportation programs, water conservation program and population concentration point programs are mostly in the nature of basic reconstruction, and the programs for education, culture and health belong to operational programs. What kind of programs should the economic geographers work out for the communes? Is it necessary for an economic geographer to choose a basic field, so that the program he works out for the commune could be more effective? Or should he work out all sorts of programs for the commune? These problems shall be discussed as follows:

1. A people's commune is a basic coordinative unit of workers, farmers, businessmen and scholars in the socialist society in our country. As a commune, it needs all sorts of programs. But the development of production is the central link of consolidating and raising the level of the commune. At present, agricultural production accounts for the largest proportion of labor and land of the commune and of the whole national economy. From the national standpoint, the production of food, oil-bearing crops, cotton etc. is still far from abundant. The communes have just started to engage in industrial production. Therefore, the programs for the communes should be centered in production, especially in agricultural production. On the other hand, the communes should gradually engage in industrial production and in the construction of transportation networks and water conservation to serve agricultural and industrial production. This is necessary for the short term as well as for the long term goals. Furthermore, upon the foundation of production development, the communes should gradually proceed with the construction of population concentration points, especially the population concentration points in the towns and market towns which are often the industrial centers and the key communication and transportation points of the communes. Therefore, it is necessary to consider the scales and arrangements of population concentration points in coordination with the developments in industry, transportation networks and water conservation. This phase of work is very important because basic construction projects are long term projects. Once a factory, a road, a bridge, a dam or even a building is constructed, it can not be moved easily. If the scales and arrangements of these projects were not well-planned, they result in losses.

It is seen then that among the programs for the communes, those for the development of agricultural and industrial production, transportation, water conservation and population concentration points are most important. (The population concentration point programs, in turn, include programs for planting landscaping trees and laying out gardens and for culture, education and health. But these are considered the component parts of the public buildings in the basic construction projects in the population concentration points and therefore should be considered in coordination with the scales and arrangements of the public buildings in the population concentration points).

It must be pointed out that the demands for the production and construction programs are not the same and that they are two different parts in the national economic planning system. It is also necessary to point out that basic construction is designed to increase fixed assets and to expand production. The purpose of basic construction is to serve production (or livelihood). When laying out the program for industrial construction, it must be considered in light of the production program, just as the road-building program should be made in light of the freight traffic. Therefore, there is a close relation between the production program and the basic construction program.

2. A people's commune is a land area, a small land area within the country. Due to the differences in the conditions for production development, each area has its own characteristics and the future production goals should not be the same for all communes. Because a commune must engage simultaneously in industrial and agricultural production and give appropriate proportions to the developments of farming, forestry, animal husbandry, subsidiary production and fishery, it will become an over-all coordinated production body in an area. Therefore, the programs for the communes should be made from over-all and coordinated viewpoints, so that the various branches of production would be well incorporated. Moreover, a well-planned program must specify what should be developed, and how much (that is, the direction of development, the structure of the various branches of production and their scales), at what speed (the annual progressive rates), where the development should be made and how it can be made (that is, arrangements and measurements needed) etc.

Economic geography is a science which studies the production arrangements, the developmental conditions and characteristics in various areas in the country. In the past year, the economic geographers have followed the leadership of the party in taking part in working out the programs for the communes, and have made contributions in various degrees in deciding the developmental principles, developmental directions, scales, and speed, in coordinating production and construction in various branches of the economy, in making sound arrangements and in dividing the areas (into agricultural areas, industrial areas, road networks, water conservation construction and population concentration points).

Therefore, in the commune programming work, the economic geographers are capable of taking charge of working out the production programs for agriculture and industry and for the construction of road networks, water conservation and the population concentration points.

3. The communes are expanding continuously and the commune programming work has been carried on only for a short period of time. Moreover, the programs for the various branches of production are closely related. At the present time, it should not limit the commune programming work to only a certain field.

A people's commune is a basic organization of the socialist government. From the programming viewpoint, it involves many things and is the common task of many sciences and various departments. Even a specific program can not be worked out by only one kind of science. The function of economic geography is not limited to programming and the programs for the communes, conversely, are not to be done by economic geography alone. For the sake of concentrating their strength, and raising the standard of commune programming in order to make more contributions to future production and construction programming works for the communes, the economic geographers seem wise to choose the production and construction programming works in agriculture, industry, transportation networks, water conservation and population concentration points as their basic tasks. Naturally, the foci of the programs should vary for different types of communes and at different stages.

B. The Relation Between Survey of Present Conditions and Commune Programming

An understanding of the present conditions of the communes is the necessary step for working out the programs for the communes. The items to be surveyed include the changes in administrative boundaries of the communes, natural conditions, natural resources, the utilization of surface and water, the historical evolution and developments of the natural and economic conditions, the structure of the population, the rate of increase in the population and its movements, the standard of living of the commune members, the characteristics of agricultural production, the original foundation of industry and the transportation facilities. It is only when there is a far-reaching understanding of the conditions and characteristics of production in the communes that we can make detailed analyses, coordinate the actual objective conditions, forecast the possibilities of future development to decide on the principles and directions of production and construction according to the state plans and to the need of the national economy, and to provide important references for determining the structure of the various departments of production, the production indices and arrangements.

In conducting the surveys of present conditions, it is necessary to find out the contradictions and to develop the potentialities of the communes. It is necessary to know whether the utilization of the production factors by the communes is sound, whether there is a coordination among the various branches of production and whether any problem exists. It is especially important to have a strong grasp of the major problems in the production developments of the communes; such problems should be explored carefully. These explorations will provide the evidence for planning sound utilization of the natural resources or for making improvements of the natural resources in the future. They also enable us to find the correct approaches to the future production development. All this is closely related to the programs to be worked out for the communes.

Although surveying the present conditions is not programming, it is the basis for laying out the programs. Survey of present conditions and economic analysis are independent stages of the programming work, but they are closely linked together and are related to commune programming.

Economic geography studies the factors and characteristics of the production development in areas and the causes that lead to the formation of these characteristics, from which it is possible to find out the direction of production development in the future. The general survey of present conditions is one of the working methods in economic geographical research. Therefore, the economic geographers should pay attention in the future commune programming work to conducting detailed surveys of present conditions, to finding out the key problems and to conducting research in depth in order to raise the quality of commune programming work.

C. Generalization and Balance of Commune Programming Work

Generalizing and balancing are the basic methods in the commune programming work. By generalizing we mean that the programs for the various branches of production in the communes should be coordinated, that the programming should be done with an over-all point of view and that the arrangements should be made as the components of a single unit. Upon the basis of generalization, the problems are studied and analyzed on an over-all basis. Then, it is necessary to determine which problem is more important and which is less important. By this process, we can find out the contradictions and the solutions to these contradictions. Therefore, it is only through generalization and balancing that we are able to determine correctly the speed and proportion in the development of the various branches in the national economic plans and to make them expand in harmony.

Generalizing and balancing is a complex problem. Balancing is the unity of temporary opposition of the contradictory elements. The development from balance to imbalance and again to balance is the rule of development. It is for the purpose of avoiding the disharmony and contradictions among the programs for various branches of production and to make the resulting programs as close to the objective developmental rules as possible. Therefore, generalizing and balancing are extremely important.

In the commune programming work, it is not only necessary to generalize and balance the various branches of production within the communes such as the balance among farming, forestry, animal husbandry, subsidiary production and fishery; the balances among the various industries, enterprises, production processes and productivity; the balance between agriculture and industry; the balance among raw materials, labor, fertilizer and feed supplies; the coordination between the traffic of the trunk lines and the short-distance transportation lines; the balance between the volume of freight traffic and transportation

capabilities; the balance among manpower (the increases in labor and the utilization of labor), material supplies (building materials and facilities, etc), financial strength, land resources, and water resources; but it is also necessary to consider the balance between the locations of the production districts within the communes, the balance of one commune with other commune (including the road networks, electricity transmission lines and water conservation) and the balance between the communes and the state. Moreover, it is also necessary to consider the balance between the short term projects and the long term projects.

The foregoing complicated relations must be coordinated by the generalizing and balancing methods. When we generalize and balance the problems, we must also obey the rule of subjecting the components to the main body. The problems must be generalized and balanced from the viewpoint of the whole commune, the whole province and the whole country.

Economic geography is a comprehensive science, which takes an over-all, general point of view in studying the production development of an area and of a branch of production. Therefore, the economic geographers must strive to broaden their learning in economics, natural sciences, production techniques, so that they can do a better job in generalizing and balancing the problems in the commune programming work in the future.

D. Preparation of Economic Maps in Commune Programming

Maps are the descriptions of the natural and economic phenomena on the earth's surface and are the basic instruments of the geographer. The descriptions of earth surface on the maps are not done in isolation but are constructed on the mathematical basis. They not only indicate the distribution of the natural conditions and the socioeconomic conditions, but also reveal their relationships.

The programs worked out for the communes not only have to point out the directions, scales and speed, of production development but also should make proper arrangements. Therefore, maps become the important component parts of the detailed programs. Complete, fine maps will play important roles in guiding the future production development.

In the course of working out the programs for the communes in the past year, the economic geographers have prepared individual maps giving the descriptions of present conditions (such as the topographical maps, township distribution maps, underground resources maps, river and lake distribution maps, population distribution maps, freight traffic maps, water conservation maps, maps of agricultural regions, maps of farming districts, proposed population concentration point maps, industrial center maps and transportation network maps, etc.) Some economic geographers even drew the correlations of industry,

agriculture, transportation network, population concentration points and the proposed programs in a single map or in several maps. These maps not only showed whether the arrangements of the various branches of production are sound, but also indicated the structure of the various branches, their scales and rates of progress. The comprehensive maps revealed clearly the relations among these factors, and whether the points (industrial centers and population concentration points) were harmonious with the lines (highways, railroads, navigation courses, electricity transmission lines, irrigation channels, etc.), whether there was any contradiction when the lines were parallel or intersected (such as the bridges in the intersection points of navigation courses and highways and railroads), and whether the points and the spaces (such as agricultural regions) were well coordinated.

Another reason why the maps have become the important parts of the commune programs is that they are easily understood by the cadres and the masses. The programs can hardly be called completed and scientific programs if the results are expressed only in tables and slogans. Lengthy texts are not appreciated by the cadres and masses. Therefore, in addition to the necessary explanations and tables, appropriate maps must be inserted by the economic geographers in the programs they work out for the communes. The problems of what kinds of maps should be included in the programs, what sorts of maps are basic for all communes, what kinds of maps should be made for specific types of communes, what kinds of maps should be used to describe only one item of information, and what kinds should be used to describe several items of information, how to compare and analyze the present maps with the proposed programming maps in order to find out the contradictions and their solutions and what kinds of map scales should be used to be easily understood by the masses are problems which still await solution.

IV. SEVERAL PROBLEMS CONCERNING THE LOCATIONS OF THE POPULATION CONCENTRATION POINTS IN THE COMMUNES

(The Population Concentration Point Program for the Ssu-chi-ching People's Commune in the Peiping Suburbs as an Example)

Following is a translation of an article by Lien I-tung, The Institute of Economic Geography, The People's University of China, in the Chinese-language periodical Ti-li Chih-shih, No. 9, September 1959, Peiping, pages 390-392.

Having taken part in working out the population concentration point program for the people's commune in the Peking suburb in the fall of 1958, the author feels that the economic geographers who take part in this phase of work should study the following problems:

A. General Observations

Since the organization of the people's communes, the material standard of living and the cultural activities of the commune members have undergone great changes and are continuously rising. The scattered and backward housing conditions at present have been unable to meet the needs for collective production and collective living. It has become necessary to rebuild the present old-fashioned houses and to construct new population concentration points in the towns and villages beautified with trees and gardens (refer to the Resolutions Concerning Several Problems in the People's Communes adopted by the Central Committee of the Party), so that the material and cultural standards of living of the people's communes can be improved, socialist reconstruction can be speeded up and the basic differences between the cities and the rural areas can be eliminated.

Therefore, the locations of the population concentration points should be able to coordinate the workers, farmers, businessmen, scholars and soldiers and to coordinate farming, forestry, animal husbandry, subsidiary production and fishery, to facilitate the leadership and administration of production, and to mobilize and allocate the labor force, so that the labor productivity can be raised continuously. While the locations of the population concentration points should meet the needs of production development, they also should provide favorable conditions for improving the livelihood, the scientific and cultural activities of the residents. Because the selection of locations of the population concentration points is designed to improve the housing conditions and the standard of living of the people, to neglect the livelihood of the people in selecting the population concentration points would make these selected locations impractical and thus affect production.

But in locating the population concentration points in the communes, the consideration of only the general purposes is still not enough. It is also necessary to find out the specific needs of the communes in various areas in accordance with their characteristics and conditions. For instance, the formulation of the population concentration point programs for the communes in the suburbs of larger cities should take into consideration, in addition to the needs of production and livelihood, the demands of the urban construction programs. The population concentration point program must look forward to the ideal of Communism, so that there will be coordination between the component parts and the whole body and there will be coordination between the short term and the long term programs.

B. Problems of Ssu-chi-ching Commune

The population concentration point location problem is a comprehensive geographical task which should survey the natural and the social factors, aiming at the over-all viewpoints but starting with small details. This means that in locating the population concentration points, the gradual concentration of the population must give careful consideration to the general layout, to the characteristics of the areas, and to its effects on production. "Starting with the details", means that in determining the exact locations of the population concentration points, it is necessary to make careful studies of the characteristics and developmental conditions of the various population concentration points on the basis of the general layout. The location of a specific population concentration point must be in accord with the general layout. It is by means of studying the general layout and by repeated comparisons that practical programs can be formulated.

In locating the population concentration points, attention should be given to the following aspects:

1. General investigation of the characteristics of the area

The general investigation of the conditions of a commune such as its geographical location, natural conditions, economic foundation, the characteristics of production development, the distribution of population, the distribution of the present population concentration points and the conditions of the nearby areas, has a very significant meaning in relocating the population concentration points of the commune. The reasons are as follows:

First, the geographical location and the natural conditions affect the characteristics and direction of the economic development of a commune and also affect the distribution and arrangements of the population concentration points. It is necessary to study carefully the effects of these conditions on the arrangements of the population concentration points. For instance, the Ssu-chi-ching Commune is located in the northwestern suburb of Peking. This suburban area has a series of scenic hills whereas the southeastern suburb is a plain

near the city. Its natural conditions and its nearness to the city of Peking has made it a well-known tourist area. The tourist points in this commune area include Hsiang-shan, Pi-yun Temple, Sleeping Budda Temple and Tzu-chu-yuan. Not far away from the commune area, there are eight well-known tourist points, including the Imperial Garden of Ching Dynasty. According to the over-all construction plan, for Peking, Hsiang-shan will be landscaped into a big tourist center. There is an airport in the center of Hsiang-shan which will be converted into a big stadium. The completion of Mi-yun Dam will channel the water of the Great Canal through the Ssu-chi-ching Commune, which will form the water network and artificial lakes, making it possible to plant more trees and flowers. Several radiating avenues, circumferential roads and broad expressways along the river bank will be constructed to connect the scenic spots, the stadium and the population concentration points. As a result, the commune area remains a rural area but will also become the garden of the capital city of Peking. Therefore, the population concentration points of the Ssu-chi-ching Commune must be located according to these over-all arrangements.

Next, the distribution, characteristics and sizes of the population concentration points are determined by the economic foundation, the production developmental characteristics, the differences in the economic developments of the various districts within the commune, the communication and transportation conditions and the degree of correlation between its economy and its culture. These factors will become the important evidences in arranging the population concentration points in a commune. Take the Ssu-chi-ching Commune for instance. Being the scenic spot in the suburb of Peking, the commune is sparingly populated, its production is less developed, and its population concentration points should be located beyond the scenic spots. The central part of the commune is a plain which has fertile soil, highly-developed agricultural economy and ready access to transportation. Being the vegetable-producing area for Peking, the plain is densely populated with a high proportion of agricultural population gathered together into villages. Consequently, several proposed population concentration points in this plain area should be located in these farming villages. The southeastern part of the Commune, adjacent to the city of Peking, is densely populated with many residences and a small proportion of agricultural population. Nearly linked together with the city, the southeastern part of commune area has gradually lost its suburban status. Therefore, the proposed population concentration points in the southeastern part of commune should be planned in coordination with the construction plan of the city of Peking. These proposed population concentration points should not become isolated organizational systems.

Finally, the distribution and characteristics of the present population concentration points in a commune, their scales and types, the relation among the population concentration points and the relation

between the residents and the various branches of production directly affect the number, locations, characteristics, scales, and directions of development of the proposed population concentration points. For instance, the present population concentration points in the Ssu-chi-ching Commune are rather scattered. Of the 157 natural villages in the commune, 80 percent of the villages have fewer than 100 families, and only two villages have more than 500 families. These existing population concentration points are small and scattered. The field surrounded small villages which were formed by those who guarded the tombs of the nobles in the feudal era and by the small individual peasants. That was the reason why these villages engaged in vegetable production. Other villages located in convenient areas include Lan-ting-chang, Pa-li-chuang and Tien-chun and others which were once prosperous centers of transportation, commerce and the tourist trade but gradually degenerated into large market towns. After liberation, the basic construction projects have led to the formation of several large population concentration points in the southeastern part of the commune, including Lang-cha-tien, Sha-ko and Te-cha-fen and the like. Other larger agricultural population concentration points include Hei-ta, Tung-yen-chun and others. The above population concentration points have become the political and economic centers of the Ssu-chi-ching Commune or of its administrative districts. In short, it is only through the understanding of these characteristics that sound decisions in locating the permanent or temporary population concentration points could be made.

2. Understand the needs The population concentration point program is one of the most urgent problems of the newly-organized communes that need to be solved as soon as possible. A thorough understanding of the needs of the communes is the basis and the starting point of formulating the population concentration program.

First, a commune embraces the functions of the workers, farmers, businessmen, scholars and soldiers. Therefore, the arrangements of the population concentration points should provide favorable conditions for the general developments of the workers, farmers, businessmen, scholars and soldiers. The population concentration points should be either as close as possible to the industrial areas or in the centers of the farming areas, so that farming operations on all sides could be easily administered. In addition, these population concentration points must have ample grounds for developing trade, cultural, education and health activities and for setting military training facilities. These facilities will enable the commune members to become all-round hands: workers-farmers-businessmen-scholars-soldiers.

Other than facilitating the leadership and production administration, the population concentration points must be in appropriate sizes for the production development of the commune in order to continuously increase the material and cultural standards of living of the commune members. How big should a population concentration point

be? There is no fixed standard. The size of a population concentration point must be varied with the characteristics of the localities. The following factors should be considered: the central population concentration point of a commune should be bigger than the other population concentration points. The population concentration points in the plains should be bigger than those in the hilly areas, and those in the hilly areas should be bigger than those in the mountain areas. The densely populated areas should have bigger population concentration points than the sparsely populated areas. The population concentration points in the suburban areas should be bigger than those in the rural areas. In general, each population concentration point should have ample space for setting up an elementary school, a child-care center, a clinic, a market, a library and other service organizations to meet the needs of the residents.

Next, it is necessary to mix well with the masses in order to understand their production and living needs and their opinions in the arrangements of the population concentration points and in the improvement of the housing conditions. For instance, in formulating the population concentration point program for the Ssu-chi-ching Commune in the Peiping suburb, it was understood that the present small and scattered villages are inconvenient to the production and livelihood of the members. Certain production teams with fewer than 100 families are scattered along an area of three to four li in length, which is inconvenient for taking part in collective production and for holding meetings. They are quite distant from the child-care center, from the messhall and from the school. The masses and the cadres all feel that the scattered villages should be concentrated and the housing conditions should be improved. They also make many valuable suggestions in relation to the sizes of the proposed population concentration points, the style of the buildings, the sources of the construction materials and so on. These suggestions are significant in making arrangements of the proposed population concentration points.

Finally, it is not only necessary to understand the needs of the commune under study but should also understand the needs of the related concerns. The arrangements of the population concentration points must take into consideration the over-all points of view and must be continuously supplemented and revised. This is particularly important in arranging the population concentration points in the communes in the suburbs of the large cities. The final locations, sizes and developmental directions of the population concentration points in the communes in the city suburbs can be made only after making close contact with the city planning agencies, and understanding the places of the communes in the city construction plans and in the plans of setting up the state-operated or city-operated enterprises, basic construction projects, the road program and the canal construction and so on.

3. Utilization of all favorable conditions. Having studied the characteristics of the area and the objective needs, we must select and determine the population concentration points only by fitting the practical conditions into the long term programs. The programs can be used as the guides for promoting construction and production and can take advantage of all favorable conditions presently available.

Many favorable conditions have emerged after the organization of the people's communes; they are extremely helpful in the location and arrangement of the new population concentration points. These favorable conditions are many-sided, some of them being general in nature while others are specific. In terms of development, they are contradictory and have time elements involved. Therefore, intelligent utilization of these favorable conditions is not as easy as it seems.

According to the author's experience of participation in working out the population concentration point program for the Ssu-chi-ching Commune, the first consideration in the selection and determination of the population concentration points is the favorable natural conditions. This includes the selection of proper locations with high topography, sufficient water resources, fine surroundings and ample room for expansion to provide fine housing and living conditions for the commune members.

Next, the larger existing population concentration points should be utilized insofar as possible and should be fitted into the long-term prospects. The larger existing population concentration points have been developed through longstanding historical processes and have often become the economic, political, and cultural centers of an area. They have convenient transportation facilities and close relations with the adjacent population concentration points. The buildings in these existing large population concentration points have solid foundations, fine service facilities and occupy very little farm land. Moreover, the utilization of these population concentration points also meets the historical customs and demands for collective living. For instance, when the Ssu-chi-ching Commune selected Lan-ting-chuang, Pa-li-chuang and Mon-tou as its population concentration points, these factors were fully taken into consideration. The selection of Lang-cha-tien as a new population concentration point was for the purpose of setting systematical population concentration points according to the post-liberation plans.

Finally, it is necessary to utilize the specific favorable conditions existing in the commune. When locating the new population concentration points in the Ssu-chi-ching Commune, factors such as the large enterprises existing in Peiping, and the public buildings and public service facilities in the commune were carefully considered and utilized in order to reduce the investments in the non-productive construction projects.

4. Sound arrangements within the population concentration points.
Having selected and determined the locations of the new population

concentration points, the final stage of work is to make sound arrangements within the proposed population concentration points. It is difficult for the economic geographers to shoulder this task single-handed. They can secure the assistance of the construction designers and specialists to design the production zones, residential zone, public welfare buildings, parks, streets, roads and other necessary component parts. The goal is to fit these arrangements into the various functions of the population concentration points, to have a clear-cut division of labor and to have close relations without contradictions. In this respect, we economic geographers can make helpful suggestions.

The arrangements of production districts (the internal arrangements within the population concentration points for the benefit of production and important production services,) should be done according to the characteristics of various industries. Food processing and oil processing facilities should be close to the food storage, so that the food supplies could be easily transported and processed. All factories which create noise, or bad smell or which discharge dirty water should be separated from the residential areas and be located on the lower courses of rivers. Other industrial enterprises such as clothing, weaving and special handicraft, do not involve much transportation or create noise. For the benefit of the workers going to work and returning home, these factories may be scattered here and there within the population concentration points. Agricultural production administrative agencies, which are mostly up to serve the field workers, involve frequent transportation schedules and have close relations with the farm lands around them. Therefore, the farm equipment repairing services, threshing field and grain storages should be located in convenient areas and should be close to the fields. Other facilities for subsidiary production, animal farms, field working stations and resting centers should be located according to the characteristics of the area within the scope of the over-all plan.

Residential buildings are for the comfort of the commune members. To facilitate production, these buildings should be arranged in such a way that the residents can live collectively with certain individual freedom. In making the housing arrangements, it is necessary to consider the customs of the residents. The natural conditions of the population concentration points should be fully utilized. The houses are better located in places with higher topography, good drainage and sufficient sunshine. The health and fire prevention facilities should be located near the centers of the population concentration points, so that the residents can fully enjoy these cultural and welfare facilities.

All public welfare buildings are designed for enriching the livelihood and recreation of the people and therefore should be located in the centers of the population concentration points. However, the

characteristics and the needs of the residents must be taken into consideration. Child-care centers and elementary schools are better located in the quieter and scenic spots within the residential areas.

Moreover, in order to facilitate production and beautify the population concentration points and to provide better housing surroundings to the residents, it is also necessary to build streets and roads, to plant trees and flowers around the houses and to construct parks, so that each population concentration point within the commune is a part of a large park, and each population concentration point is a beautiful little park itself.

C. Summary of the Economic Geographer's Role

Based on the experience obtained by taking part in locating the population concentration points in the communes, the author has come to realize that after the organization of the communes, the formulation of various commune programs has made it possible to coordinate theory with practice in the study of economic geography. A new road is opened up to carry on scientific research in the service of production. With regard to the population concentration point programs, the arrangements of the population concentration points assign to the economic geographers the investigation of population distribution in small areas and the construction of a Marxist demography. We economic geographers must undertake and accomplish this task with great courage.

The author has also come to realize that the population concentration point programming work is not purely a problem of economic geography. The economic geographers must cooperate with architects and designers in determining the targets, necessary measures and steps to formulate the population concentration point programs in light of the production development and the living needs of the residents. These programs must be timely and must be fitted into the characteristics of the specific areas in which the population concentration points are to be located. The selection of the locations of the population concentration points is naturally the task for the economic geographers, but once the locations are picked, the layouts and architectural designs within the population concentration points must be done by specialists. If the economic geographers also take up these special assignments beyond their duties, they may have to work twice as hard but yield only one half of the result, and thus may delay the completion of the population concentration point programs.

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